

LISTING OF CLAIMS

This listing of claims replaces all prior versions, and listings, of claims in the application.

1. (Original) A submersible motor unit for use in driving a pump with the pump submerged in liquid,

said motor unit comprising a tubular housing member,

a stator at least partially enclosed by said tubular housing member,

a tubular inner member at least partially enclosed by said stator,

said tubular inner member being disposed in a coaxial relationship with said tubular housing member,

a rotor at least partially enclosed by said tubular inner member,

a drive shaft connected with said rotor,

a first end wall connected with said tubular housing member and said tubular inner member,

a first bearing disposed between said first end wall and said drive shaft,

a second end wall connected with said tubular housing member and said tubular inner member,

a second bearing disposed between said second wall and said drive shaft,

said first and second end walls and said tubular inner member cooperating to at least partially define a rotor chamber in which said rotor is disposed,

said rotor being rotatably supported by said first and second bearings for rotation about a central axis of said rotor chamber,

said tubular inner member and said tubular housing member cooperating with said first and second end walls to at least partially define a stator chamber extends around and is located radially outward of said rotor chamber,

an annular capacitor disposed in said state chamber in an axially spaced apart relationship with said stator,

said annular capacitor extends around said rotor chamber, and

a body of potting compound disposed in said stator chamber and at least partially enclosing said stator and said annular capacitor.

2. (Original) A motor unit as set forth in claim 1 wherein said first end wall at least partially defines an opening, a diaphragm is connected with said first end wall and extends across said opening, said diaphragm having an outer side surface which is exposed to the liquid in which the pump and motor unit are submerged and an inner side surface exposed to liquid is said rotor chamber.
3. (Original) A motor unit as set forth in claim 1 wherein said annular capacitor has a cylindrical inner surface which is coaxial with and is spaced apart from a cylindrical outer surface of said tubular inner member, said body of potting compound being at least partially disposed between said cylindrical inner surface of said annular capacitor and said cylindrical outer surface of said tubular inner member.
4. (Original) A motor unit as set forth in claim 3 wherein said annular capacitor has a cylindrical outer surface which is coaxial with and is spaced apart from a cylindrical inner surface of said tubular housing member, said body of potting compound being at least partially disposed between said cylindrical outer surface of said annular capacitor and said cylindrical inner surface of tubular housing member.
5. (Original) A motor unit as set forth in claim 4 wherein said annular capacitor has a first annular end surface which faces toward and is spaced apart from said stator and a second annular end surface which faces toward and is spaced apart from said second end wall, said body of potting compound being at least partially disposed between said first annular end surface of said annular capacitor and said stator, said body of potting compound being at least partially disposed between said second annular end surface of said annular capacitor and said second end wall.

6. (Currently Amended) A submersible motor unit for use in driving a pump submerged in a liquid, said motor unit comprising:

a housing member;

a stator at least partially enclosed by said housing member;

an inner member at least partially enclosed by said stator, said inner member being disposed in a coaxial relationship with said housing member and forming a rotor chamber;

a rotor at least partially enclosed by said inner member;

a drive shaft to be operatively coupled to said rotor and rotatably supported in said rotor chamber;

a first end wall and a second end wall each connected with said housing member and said inner member, wherein said first and second end walls cooperate with said inner member and said housing member to form a stator chamber that extends around, and is located radially outward of, said rotor chamber, at least one of the first end wall and the second end wall including a threaded stud; and

a capacitor disposed within said stator chamber and insulated from said stator.

7. (Currently Amended) A submersible motor unit for use in driving a pump submerged in a liquid, said motor unit comprising:

a housing member;

a stator at least partially enclosed by said housing member;

an inner member at least partially enclosed by said stator, said inner member being disposed in a coaxial relationship with said housing member and forming a rotor chamber;

a rotor at least partially enclosed by said inner member;

a drive shaft to be operatively coupled to said rotor and rotatably supported in said rotor chamber;

a first end wall and a second end wall each connected with said housing member and said inner member, wherein said first and second end walls cooperate with said inner member and said housing member to form a stator chamber that extends around, and is located radially outward of, said rotor chamber; and

a capacitor disposed within said stator chamber and insulated from said stator. The submersible motor unit according to claim 6, wherein said capacitor is an annular capacitor that extends at least partially around said rotor chamber.

8. (Previously Presented) The submersible motor unit according to claim 6 further comprising a potting compound that at least partially encloses said capacitor to insulate said capacitor.

9. (Previously Presented) The submersible motor unit according to claim 6 further comprising a bearing disposed between one of said first and second end walls and said drive shaft.

10. (Previously Presented) The submersible motor unit according to claim 6, wherein said first and second end walls cooperate with said inner member to at least partially enclose said rotor chamber in which said rotor is rotatably supported to rotate about a central axis.

11. (Currently Amended) A submersible motor unit for use in driving a pump with the pump submerged in a liquid, said motor unit comprising:

a housing member;

a stator at least partially enclosed by said housing member;

an inner member at least partially enclosed by said stator, said inner member being disposed in a coaxial relationship with said housing member and forming a rotor chamber;

a rotor at least partially enclosed by said inner member;

a drive shaft to be operatively coupled to said rotor and rotatably supported in said rotor chamber;

a first end wall and a second end wall each connected with said housing member and said inner member to form a stator chamber that extends around, and is located radially outward of, said rotor chamber, at least one of the first end wall and the second end wall including a threaded stud; and

a capacitor having a plurality of leads that establish an electrical connection to said stator, wherein said electrical leads are disposed entirely within said housing member.

12. (Previously Presented) The submersible motor unit according to claim 11, wherein said first and second end walls cooperate with said inner member to at least partially enclose said rotor chamber in which said rotor is rotatably supported to rotate about a central axis.

13. (Previously Presented) The submersible motor unit according to claim 11, wherein said leads are electrically conducting wires disposed entirely within said stator chamber.

14. (Currently Amended) A submersible motor unit for use in driving a pump with the pump submerged in a liquid, said motor unit comprising:

a housing member;

a stator at least partially enclosed by said housing member;

an inner member at least partially enclosed by said stator, said inner member being disposed in a coaxial relationship with said housing member and forming a rotor chamber;

a rotor at least partially enclosed by said inner member;

a drive shaft to be operatively coupled to said rotor and rotatably supported in said rotor chamber;

a first end wall and a second end wall each connected with said housing member and said inner member to form a stator chamber that extends around, and is located radially outward of, said rotor chamber; and

a capacitor having a plurality of leads that establish an electrical connection to said stator, wherein said electrical leads are disposed entirely within said housing member. The submersible motor unit according to claim 11, wherein said capacitor is an annular capacitor that extends at least partially around said rotor chamber.

15. (New) A submersible motor unit for driving a pump unit submerged in a liquid, the submersible motor unit comprising:

a housing member at least partially enclosing a stator chamber;

an upper end wall coupled to the housing member, the upper end wall adapted to be coupled to the pump unit;

a stator at least partially positioned within the stator chamber, the stator including a rotor chamber having a first diameter;

a rotor at least partially positioned within the rotor chamber; and

an annular capacitor at least partially positioned within the stator chamber, the annular capacitor having an inner diameter substantially equal to the first diameter of the rotor chamber, the annular capacitor positioned between the stator and the upper end wall.

16. (New) The submersible motor unit of Claim 15, and further comprising an upper end cap and a threaded stud.

17. (New) The submersible motor unit of Claim 16, wherein the upper end cap is fixedly connected in sealing engagement with the housing member by the threaded stud.